

**BEFORE THE HEARINGS PANEL
FOR THE PROPOSED QUEENSTOWN LAKES DISTRICT PLAN**

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of Resort Zone Hearing
Stream 9

**STATEMENT OF EVIDENCE OF SAMUEL MORGAN CORBETT
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

TRANSPORT – JACKS POINT AND MILLBROOK ZONES

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 **Simpson Grierson**
Barristers & Solicitors

S J Scott
Telephone: +64-3-968 4018
Facsimile: +64-3-379 5023
Email: sarah.scott@simpsongrierson.com
PO Box 874
SOLICITORS
CHRISTCHURCH 8140

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1. INTRODUCTION

- 1.1 My full name is Samuel Morgan Corbett. I hold the position of Transport Planning Section Leader for Jacobs New Zealand Limited (**Jacobs**). I have been in this position since October 2015.
- 1.2 I hold the qualifications of a Bachelor of Science in Environmental Planning, Analysis and Policy (graduated with Honours), from University of California, Davis and a Master of City Planning from University of California, Berkeley. I am a Member of the IPENZ Transportation Group.
- 1.3 I have been engaged by the Queenstown Lakes District Council (**QLDC**) to provide evidence in relation to transport matters that relate to the Jacks Point and Millbrook chapters of the Proposed District Plan (**PDP**).
- 1.4 I have completed a site visit of both Jacks Point and Millbrook resorts and am therefore familiar with the local traffic issues and constraints. I am generally familiar with the identified urban areas of the District from numerous visits to Queenstown over the past seven years.
- 1.5 I have recently been involved in preparing traffic evidence and testifying as an expert witness for the notice of requirement and resource consent application to construct a new watermain from Titirangi to Albany in the Auckland region. I have also assessed the traffic effects of numerous development projects in the Auckland region.
- 1.6 Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.
- 1.7 The key documents I have used, or referred to, in forming my view while preparing this brief of evidence are:

- (a) notified Jacks Point and Millbrook chapters;
- (b) section 32 reports for the Jacks Point and Millbrook chapters;
- (c) Hanley Downs Plan Change Transportation Assessment by Traffic Design Group (2012) (prepared for Plan Change 44); and
- (d) MWH Engineers Feasibility Assessment for Consent Application for Hanley's Farm Development DP1 – Appendix F – Hanley's Farm Intersection with SH6 – Preliminary Intersection Design.

2. EXECUTIVE SUMMARY

2.1 In conclusion the key findings from my evidence are that:

Jacks Point Zone

- (a) in 2012, a transportation assessment report was prepared by TDG for the Hanley Downs Plan Change 44. The traffic modelling results in the Traffic Design Group (**TDG**) report demonstrated that a single access (the existing intersection at State Highway 6 / Maori Jack Road) would not have sufficient capacity to cater for the anticipated traffic under the Plan Change 44 scenario;
- (b) the maximum land use capacity possible in the Jacks Point zone has now changed significantly since the assessment undertaken by TDG in 2012. The notified chapter allows for approximately a 55% increase in dwellings (an additional 1843 dwellings within the residential areas, Education Innovation Campus (**EIC**), and villages) when compared to the figures that TDG relied on for their modelling and the proposed village centre has increased in size;
- (c) I support the location of the Woolshed Road access with State Highway 6 as indicated in the Structure Plan in Rule 41.7, given that the majority of the peak hour traffic generated from the Jacks Point Zone will be travelling to or

coming from the Frankton and Queenstown areas in the north;

- (d) I support providing access to and from State Highway 6 at the intersections at Maori Jack Road, Woolshed Road and at the third access approved via RM160562 by the NZTA (Rule 41.5.6) on the basis that the TDG assessment demonstrated the need for two accesses to service the predicted traffic generation from Jacks Point (with the lower level of development assumed at that point). As the notified zone is currently enabling further development, it is likely that a third access will be required to support future traffic and due to this likelihood, I support retaining the Woolshed Road access as an option for the future. However, due to the absence of updated traffic modelling I am unable to advise regarding the specific timing and/or trigger point at which this access would need to be provided. Regardless, I agree with the submission from Jacks Point Residential No. 2 (762) that a rule requiring the upgrade of Woolshed Road and State Highway 6 intersection should be added prior to allowing increased use of Woolshed Road;
- (e) there is insufficient data at present to determine the potential traffic effects on the internal and wider roading network. Therefore, it is recommended that additional traffic modelling is undertaken to better understand the traffic effects associated with the Jacks Point Zone at the resource consent stage. I am comfortable to note that the zoning could proceed at this point in time without the additional traffic modelling, however traffic effects need to be a matter of discretion/ control when considering development proposed within the villages. Further traffic modelling is therefore required prior to the development of the EIC or the village activity areas as per the notified Structure Plan.

Millbrook Zone

- (f) for the Millbrook Zone, I consider that the extension of the zone over the Dalgleish Farm will not result in adverse traffic

effects as the overall number of dwellings permitted in the zone is not proposed to be increased.

3. BACKGROUND

Plan Change 44

- 3.1 A traffic assessment was undertaken by TDG in 2012 (**TDG Report**) for the area under consideration (Jacks Point and Hanley Downs area) as part of a Plan Change which amended the Hanley Downs part of the zone (Plan Change 44). The land use assumptions and modelling results presented in the TDG assessment have been considered in my evidence for assessing the efficiency and safety of access from the State Highway to the Jacks Point Zone.
- 3.2 Based on the Plan Change 44 request, it was assumed that the full zone will likely include a Golf Course, approximately 3,434 residential units (1,668 at Jacks Point and 1,766 at Hanley Downs), 6,600m² office area, 13,400m² retail area and a Primary school to cater for 600 pupils and two pre-schools with 30-40 pupils. I note that these figures are lower than those which Ms Jones has estimated under the Operative District Plan (**ODP**); in part because TDG were considering the Plan Change 44 scenario rather than the ODP, and presumably also due to different assumptions having been made by Ms Jones and TDG in regard to how much development is possible within the different activity areas.
- 3.3 Under the QLDC Land Development and Subdivision Code of Practice, each residential property is required to be assessed as generating 8 vehicle movements per day (two-way). This rate has been assumed for both residential and visitor accommodation dwellings in the TDG assessment and accepted by Council.
- 3.4 Based on the location in relation to local employment and recreational activities, it is reasonable to assume that the majority of the peak hour traffic generated from the Jacks Point Zone will be travelling to or coming from the Frankton and Queenstown areas (i.e. north of the development). The TDG assessment also assumed 80% of traffic

movements to and from the north of the development and 20% to and from the south.

- 3.5** The traffic modelling results in the TDG Report demonstrated that a single access (the existing intersection at State Highway 6 / Maori Jack Road) would not have sufficient capacity to cater for the anticipated traffic under the Plan Change scenario.
- 3.6** As part of Plan Change 44 it was proposed that a second access be provided at the existing State Highway 6 / Woolshed Road intersection. The traffic modelling results in the TDG Report demonstrated that with two accesses operating (the existing intersection at State Highway 6 / Maori Jack Road and State Highway 6 / Woolshed Road intersection), the former intersection operates well but Woolshed Road operates poorly. The TDG Report recommends a roundabout at the Woolshed Road intersection as a long term outcome (at full development of the Plan Change scenario at Hanley Downs), which is said to provide a good level of service with the full development in place.
- 3.7** The TDG Report also noted that travel demand management and/or public transport improvements could be implemented as a means of reducing traffic generated by the Jacks Point Zone. These measures would be consistent with the strategic direction established in the Wakatipu Transportation Strategy (**WTS**), which seeks to deliver a fully integrated transport system that meets the growth in travel demand. However, there does not appear to have been any further consideration of public transport measures since the TDG Report was prepared.
- 3.8** The TDG Report also conducted a sensitivity analysis to determine the level of development that could be catered for in order for Woolshed Road to operate at acceptable levels. Results indicated that up to 1,250 residential units could be developed at Hanley Downs in addition to the other non-residential activities outlined in section 3.3 before access at the Woolshed Road or Maori Jack Road intersection becomes restricted.

4. CHAPTER 41 – JACKS POINT ZONE

4.1 The maximum land use capacity possible in the Jacks Point Zone has changed significantly since the assessment undertaken by TDG in 2012. A comparison of the land use assumptions is provided below:

2012 land use assumptions in the TDG Assessment	2017 land use assumptions under the notified Chapter 41	Recommendations under the draft S42A
JACKS POINT		
Golf Course	Golf Course	
800 houses in residential neighbourhoods	905 houses in residential neighbourhoods	
18 houses on rural residential preserve sites	36 houses on rural residential preserve sites	
700 houses in village	245 houses in village	
150 visitor accommodation units	884 visitor accommodation units	
6,000 m ² office area	59,000 m ² commercial/ retail and community	Recommend capping at 9.9 ha
12,000 m ² retail area		
	5 ha of education activity area - sufficient for primary school and preschools, as one scenario akin to that assumed in the TDG Report	
HANLEY DOWNS		
1,750 houses in residential neighbourhoods	2,521 houses in residential neighbourhoods	
16 houses on rural residential preserve sites	34 houses on rural residential preserve sites	Recommend 21 dwellings
600 m ² office area	EIC: 413 ancillary units & 124,125 m ² of technology-based commercial, education and associated retail, etc.	Recommend capping at 550 m ² within the Hanley Downs
1,400 m ² retail area		
Primary School to cater for 600 pupils	See above. Relocation of this activity to the Education Activity Area	
Preschools: 2 with 30-40 pupils each		
HOMESTEAD BAY		
Not included in the TDG assessment	239 residential and village areas	
	21,000 m ² footprint of Commercial/ community/ retail/ residential/ visitor accommodation	Recommend capping commercial component to 28,300 m ²

4.2 The key outcomes from the above comparison show that the total visitor accommodation and residential dwellings assumed under the full zone in the TDG assessment is 3,434 dwellings; and under the

PDP is 5,277 dwellings. This is approximately a 55% increase in dwellings (an additional 1,843 dwellings) under the PDP.

4.3 The total commercial, retail and community areas assumed under the full zone in the TDG assessment is 20,000 m². Under the notified PDP it is estimated that 206,075 m² of such activity could occur based on certain assumptions regarding the mix of uses (e.g. commercial, community, residential, and visitor accommodation) that will be accommodated within the villages and EIC. This means a significant increase in the estimated commercial/ retail capacity compared to that assessed in the TDG assessment. This increase is largely due to the addition of the EIC, the increased size of the Jacks Point village, an acknowledgment that a lot greater proportion of the villages could be developed as commercial, retail, and community areas than assumed by TDG, and that TDG did not factor in the capacity within the Homestead Bay Village.

4.4 The sensitivity test that TDG undertook showed that up to 2,934 dwellings could be built in the full Jacks Point development in addition to the other non-residential activities outlined in section 3.3 before access at the Woolshed Road or Maori Jack Road intersections becomes restricted. Given the level of residential activity now being enabled (estimated as 5,277 dwellings and visitor accommodation units), the traffic to, from, and within the development will likely increase significantly, as each residential property is required to be assessed as generating 8 vehicles movements per day (two-way).

5. JACKS POINT ZONE – ACCESS TO STATE HIGHWAY

5.1 I support the location of the Woolshed Road access with State Highway 6 as indicated under Rule 41.7 (Structure Plan) given that the majority of the peak hour traffic generated from the Jacks Point Zone will be travelling to or coming from the Frankton and Queenstown areas in the north. It is important to note that if the Woolshed Road / State Highway 6 intersection is to be used in future for access by the development, it will likely require upgrading for increased safety and capacity, which would include appropriate turning lanes on State Highway 6 and realignment of Woolshed Road

approach to the intersection designed to meet the QLDC and the NZ Transport Agency intersection design standards.

- 5.2** I support providing access to and from State Highway 6 at the intersections at Maori Jack Road, Woolshed Road and at the third access approved via RM160562 by the NZ Transport Agency (Rule 41.5.6) on the basis that the TDG Report demonstrated the need for two accesses to service the predicted traffic generation from Jacks Point (with the lower level of development assumed at that point). As the notified zone is currently enabling further development, it is likely that a third access will be required to support future traffic.

6. JACKS POINT – PROVISIONS CONTROLLING TRAFFIC EFFECTS

- 6.1** I have been asked to consider the inclusion of a policy and rules in the Jacks Point chapter which together, acknowledge that traffic generation and the consequential effects of traffic generation may constrain the extent and/ or type of development that is able to occur within these activity areas, and that Council may impose conditions on consent in order to ensure such effects are able to be managed (or decline building development where necessary).
- 6.2** There is still uncertainty as to how much development will realistically occur and, due to the large extent of the notified village areas and the mix of uses enabled within them, it is difficult to accurately predict traffic generation at this point in time. Further analysis will also need to be undertaken at resource consent stage to confirm the capacity of State Highway 6 to accommodate future traffic from the development given the significant increase in traffic associated with the proposed 5,277 dwellings. For example, there could be considerable network effects on State Highway 6, at the Kawarau Bridge (even once it has been widened), and through Frankton and into Queenstown.
- 6.3** Therefore I am of the view that policy and control/ discretion over traffic effects are necessary in the PDP which, together acknowledge that traffic generation and the consequential effects of that may constrain the extent and/ or type of development that is able to occur within the village (and EIC if it is accepted) activity areas, and that

Council may impose conditions on consent in order to ensure such effects are able to be managed (or decline building development where necessary).

7. JACKS POINT ZONE (RESPONDING TO SUBMITTERS)

Alternative Access via Lot 3 DP 475609

- 7.1** RCL (855) seeks that State Highway 6 access be enabled via Lot 3 DP 475609 (in addition to or instead of the Woolshed Road intersection). The submitter also seeks that the rules enable the final location of the State Highway 6 and Woolshed Road intersection to be moved 120 m in either direction, and that resource consents that utilise an access in this location be processed with the same activity status as development that is accessed via Woolshed Road.
- 7.2** The TDG Report showed that a second access on to State Highway 6 is required from Jacks Point Zone to cater for the traffic anticipated by the development. It is my understanding that this new access onto the State Highway and the design of the collector road has now been approved via RM160562 and the NZ Transport Agency has provided its 'affected party approval' for the proposed access onto the State Highway in the context of the 109 lots consented by RM160562.
- 7.3** As there is insufficient data to accurately determine the likely traffic generation from the future development and whether the upgrade of the Woolshed Bay Road intersection will also be necessary at some point in the future, I consider that Woolshed Road and its connection with State Highway 6 should be shown on the Structure Plan.
- 7.4** I also support the submitter's request to allow for a variance of the final location of the State Highway 6 and Woolshed Road intersection by up to 120 m in either direction to be provided for in the District Plan Rules. This will ensure sufficient flexibility to allow the intersection to be designed and located in the best location, following detailed analysis to be undertaken at a later time.

7.5 It should be noted that the design of the third access will need further attention as, in my view, the current assessment of this access does not sufficiently consider matters related to:

- (a) safety;
- (b) expected traffic volumes and design speeds;
- (c) internal road layout and road hierarchies;
- (d) alternative traffic calming treatments;
- (e) vehicle tracking curves at intersections;
- (f) pedestrian and cycle facilities;
- (g) future public transport services;
- (h) connectivity to existing subdivisions; and
- (i) position to proposed town centre.

7.6 It is my understanding that the third access will be a sealed public access road and designed to comply with QLDC Land Development and Subdivision Code of Practice requirements and standards, as it is not proposed to be a public road.

7.7 Consideration also needs to be given to how vehicles will access the third access to the State Highway via the local road network. In my view there are a number of straight local roads in the proposed development that may function more as collectors. To mitigate potential rat running and speeding, it may be more appropriate to design these roads as collectors with appropriate traffic calming measures and pedestrian and cycle facilities. In my view this is particularly important for the north-south spine road that is proposed to connect to the local town centre.

Village Woolshed Road

7.8 Vivo Capital Limited (789) seeks an amendment to the Jacks Point Structure Plan to create an additional village centre area. The submitter has not provided detailed information about the size of the proposed village or its traffic effects, but Ms Jones has estimated that it could result in at least a further 600 residential dwellings plus a considerable amount of commercial, visitor accommodation, and high density residential traffic (if we assume the village part is a few

hectares in area and can be built with a 60% coverage and up to 10 m in height).

- 7.9** Any further development will likely result in noticeable traffic effects if only two accesses on to State Highway 6 were to be operated from the development area. There is insufficient data at present to determine the potential traffic effects on the internal and wider network. It is recommended that further traffic modelling is undertaken to forecast these effects.

Education Innovation Centre

- 7.10** Submissions from Scope Resources, Williams, Geddes and Alexander Schrantz indirectly oppose changing an area of land from Open Space to EIC.
- 7.11** I understand that a Memorandum of Counsel circulated on behalf of Jacks Point Residential No. 2 and others (762, 856 and 1275) dated 15 December 2016 sets out other draft changes to the EIC including converting educational uses to a village and a likely increase in the yield of residential dwellings as well.
- 7.12** There is insufficient data at present to fully assess the traffic impacts of the EIC, either in its notified form or as proposed in the memorandum dated 15 December 2016. To fully understand the traffic effects of the EIC, it is recommended that traffic modelling is completed to assess the future traffic conditions at the various access points to the State Highway. However, in my view, the notified proposal, which Ms Jones estimates could add 413 additional dwellings and up to 124,125 m² of commercial/ retail/ educational land use in the EIC, will likely result in noticeable traffic effects, particularly if only two accesses on to SH6 were to be operated from the development.

8. MILLBROOK ZONE

- 8.1** The section 32 evaluation report does not assess traffic effects associated with the proposed extension (referred to as Stage 3D) of

the Millbrook Zone over the Dagleish Farm. While the overall number of residential units provided for in the rules is not changing (remaining at 450), there is a new access off Streamside Lane, currently a farm access, which I understand will also be used to access properties in the Dagleish Farm portion of the extended Millbrook Zone.

8.2 Concept Masterplan Plans approved under the RM150564 Decision¹ (pages 106-112) shows the proposed access will be via an extension to Dagleish Lane northwards, with a new intersection with Streamside Lane on the apex of the right-angled corner just south of the Malaghans Road access to State Highway 6. The RM150564 Decision¹ noted that:

- (a) while the access lots will be held in private ownership, the road designs are expected to be in accordance with Table 3.2 of the QLDC Land Development and Subdivision Code of Practice (page 81);
- (b) the road will be formed as a 6.0 m carriageway within a 20 m legal width (page 81);
- (c) the applicant has confirmed that sufficient sight-lines exist at the proposed intersection with Streamside Lane (page 81); and
- (d) the design for the formation of the Streamside Lane and Dagleish Lane north intersection is required to be in accordance with the latest Austroads intersection design guides (with the exception of heavy vehicles turning and the allowance of heavy vehicles to use the full carriageway whilst turning) and the provision vehicle barriers on the Mill Creek crossing in accordance with other culvert crossings of Mill Creek within Millbrook based on these being appropriate to the design speed and Millbrook environment (page 19);

8.3 Submitter Siddall and Tweedie (14) have opposed the zone extension, raising effects from increased traffic and reduced safety as one of their reasons.

¹ Decisions of the Queenstown Lakes District Council, Notification under S95 And Determination under S104, Resource Management Act 1991. RM150564; Applicant: Millbrook Country Club Limited (RM151064); Decision date 18 March 2016.

- 8.4** I consider that the proposal will not result in adverse traffic effects.
- 8.5** There is not likely to be an appreciable increase in overall trip generation rates with the same number of dwellings provided for within the zone, albeit over a larger area for a reduced density. As the trip generation rates will be essentially unchanged, there is not likely to be any change in traffic volumes, traffic profiles, mode share, intersection performance, and road safety compared to the operative zone.
- 8.6** The performance and suitability of the proposed Streamside Lane and Dalgleish Lane north intersection is not considered to be changed from the Concept Masterplan Plans (approved under the RM150564 Decision¹), given the existing layout was based on the same traffic volumes expected under the proposal which was deemed acceptable by the previous Decision. Further, the design is required to be undertaken in accordance with Austroads and generally in accordance with the QLDC Land Development and Subdivision Code of Practice. On this basis, I have no concerns on the proposed Streamside Lane and Dalgleish Lane north intersection.



Samuel Morgan Corbett

17 January 2017